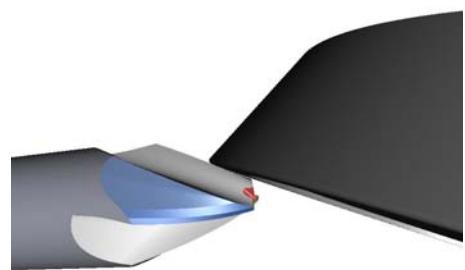


Tapered Endmill Ø3-Ø12 Z3 C30°

A01-010

The programming and grinding of a high taper endmill in Quinto5 is done a simple standard endmill. Usually a constant helix angle is chosen to avoid a strong variation of the helix angle from the end- to the shankdiameter. To increase productivity in manufacturing, the taper can be preground with a roughing operation. The below grinding times consider no pregrinding, the tool is ground from 12 mm solid blank.



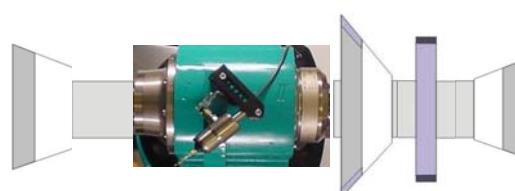
1. Cycletime for Production

Workpiece:	Ø3 mm, shank-Ø12 mm, Z 3, L 16 mm, Helix 15°, Taper 30° Material CARBIDE							
Operations	Probe	Flute 1	Gashing	O.D.3	O.D.2	O.D.1	End 2	End 1
Feed [mm/Min]	2000	45	100	50	150	300	100	100
Power [kW]		3	2	1	1	2	1	1
Cutting speed [m/s]		19	22	22	22	22	22	22
Used wheels		1	2	3	4	4	4	4
Grinding time [s]	17	143	26	122	33	23	24	24
Total cycle time	6 Min 50							

The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.

2. Used Grinding Wheels

1	1A1 Ø100 D64
2	12V9 Ø125 D64
3	11V9 Ø100 D64
4	11V9 Ø75 D64



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2 1 4

3. Machine and Software Requirements

Machines: 5 axes CNC grinders : NORMA CFG

Coolant: Synthetic Oil, pressure 6 bar

Control: Fanuc 31i

Software: Quinto 5

Accessories:

Responsible engineer: OP. 7.2.12

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